

REMARKS

The Applicant does not believe that examination of the foregoing amendment will result in the introduction of new matter into the present application for invention. Therefore, the Applicant, respectfully, requests that the foregoing amendment be entered and that the claims to the present application, kindly, be reconsidered.

The Advisory Action dated December 14, 2004 has been received and considered by the Applicant. Claims 1-22 are pending in the present application for invention. The Advisory Action dated December 14, 2004 affirms the rejection of Claims 1-8 and 11-22. Claims 9-12 are objected to but otherwise stated as being allowable. The foregoing amendment add new Claim 23 discussed hereinbelow.

The Advisory Action affirms the rejection of Claims 1-3 and 13-15 under the provisions of 35 U.S.C. §102(b) as anticipated by Takasago et al. (hereinafter referred to as Takasago et al.).

Regarding Claim 1, the Examiner states that Takasago et al. disclose in FIG. 1 examining of a record carrier for the presence of a defect. The Examiner further states that Takasago et al. at column 5, lines 47-column 6, line 14 teach rating the track. The Applicant, respectfully, disagrees. Takasago et al. teach identifying the occurrence of an off track situation. The Applicant asserts that the occurrence of an off track situation is not equivalent to rating the track. The teachings of Takasago et al. relate to actions that take place upon detection of an off track situation. Takasago et al. do not provide any teaching or suggestion for the rating of the track for a defect.

Takasago et al. teach identifying the occurrence of an off track situation that can be caused by a number of events including movement of the disc/player or lack of a level surface. Takasago et al. teach detection of an off track situation and not detection of defects within the media. Takasago et al. do not disclose or suggest rating of tracks on the media or determining if there is a defect in the track. Takasago et al. provide no teaching, suggestion or motivation that would lead a person skilled in the art to rate a track as being defective. Takasago et al. examines the track signal to determine if there is an off track situation. Therefore, in order to clearly distinguish the present invention from the teachings of Takasago et al., Claim 1 has been amended to define subject matter for rating the examined recording track

for the presence of media defects. The Applicant, respectfully, submits that Takasago et al., do not disclose or suggest that rating of a recording track for the presence of media defects.

Regarding Claim 2, the Examiner states that column 5, line 47-column 6, line 14 of Takasago et al. disclose that a track is determined as being defective if the absolute value of the tracking signal exceeds a predetermined threshold. The Applicant points out that column 5, line 47 to column 6, line 14 of Takasago et al. discuss tracking errors determined by application of a tracking signal to a pair of comparators. The tracking signal as taught by Takasago et al. that results from the light spot tracking near the center of the track results in each comparator yielding a logical “0” indicative of proper tracking. The tracking signal as taught by Takasago et al. can result from the light spot digressing from the center of the track resulting in a tracking signal with an amplitude larger than $+V_{REF}$ or $-V_{REF}$. That portion of the tracking signal having an amplitude with an absolute value that is larger than the absolute value of $+V_{REF}$ or $-V_{REF}$ results the one of the comparators yielding a logical “1” for the period of time that the absolute value of the tracking signal is larger than the absolute value of $+V_{REF}$ or $-V_{REF}$; which is interpreted as not tracking properly. The provision of a logical “1” by Takasago et al. is not equivalent to rating a track as defective, much less rating a track as defective if the absolute value exceeds a predetermine value for a predetermined time as recited by rejected Claim 2. Takasago et al. clearly teach that the comparator yielding a logical “1” identifies track digression. Takasago et al. clearly teach corrective actions that take place once track digression becomes off track. Takasago et al. do not disclose or suggest rating tracks for media defects. Accordingly this rejection is, respectfully, traversed.

Regarding Claim 13, the Examiner states that Takasago et al. disclose at column 5, lines 5-20; column 5, line 47- column 6, line 14, monitoring a recording track to provide a rating of defects contained on the track. As previously discussed, Takasago et al. do not teach or suggest rating a track. Column 7, lines 6-19 of Takasago et al. teach an action that can takes place on the determination of the light spot being off track based on the level of the tracking signal. The Applicant’s position is that the categorization of a tracking signal as being indicative of the light spot being off track as taught by Takasago et al. is not equivalent to “rating the track” as recited by the rejected claims. The Applicant, respectfully, submits that Claim 13 is allowable over the cited reference, Takasago et al.

Regarding Claim 14, the Examiner states that Takasago et al. disclose that the

recording is discontinued if the tracking signal exceeds a predetermined value for a predetermined period of time at column 5, line 47- column 6, line 14. The Applicant, respectfully, points out that column 5, line 47 - column 6, line 14 of Takasago et al. teach that if the digression of the tracking signal reaches a certain level, an indication that tracking signal is off track will result by multiple logical “1” pulses being emitted. The multiple logical “1” pulses result from a sway in the tracking signal as shown in FIG. 3b, reference numeral 16, of Takasago et al.; which is not equivalent to exceeding a predetermined threshold for a predetermined period of time. The additional period of time referred to by Takasago et al. is the additional logical “1” pulses themselves and not a period of time that the tracking signal exceeds a threshold. Takasago et al. do not disclose or suggest that if the tracking signal exceeds a predetermined value for a predetermined time, that the recording process is discontinued. Takasago et al. teach that the off-track signal is sent to a latch circuit 28 if the duration of time exceeds another time period, T2 (see column 6, lines 7-13). The output signal 39 of latch circuit 28 does not indicate that recording is to be halted, but instead that recording continues in a different area (see column 6, lines 60-68). Takasago et al. teach that if the time width of the logical “1” being greater than T1 but less than T2, or the time width of the logical “1” being greater than T2, it is the logical “1” pulse for which the time duration is measured. Takasago et al. do not provide and disclosure or suggestion related to the time period of the tracking signal. Therefore, this rejection is, respectfully, traversed.

Regarding Claims 3 and 15, the Examiner states that V_{REF} within Takasago et al. corresponds to a preselected fraction of the maximum value. The Applicant does not concur with the Examiner’s position that V_{REF} as taught by Takasago et al. is equivalent a preselected fraction of the maximum value corresponding to a portion of the maximum amount of lateral deviation from the center of the track. The Applicant draws the Examiner’s attention to the clear teaching of Takasago et al. on column 5, lines 47-49 wherein it is stated that the tracking error signal is compared with reference voltages. There is no disclosure or suggestion within Takasago et al. for taking any fractional portion of the reference voltages as the predetermined threshold. Furthermore, the maximum lateral deviation disclosed by Takasago et al. is the occurrence of an off track situation and the tracking error signal taught by Takasago et al. The tracking error signal does not have a greater value during the period of off track. Takasago et al. teach that during off track (maximum lateral deviation), the tracking error signal swings from

plus to minus exceed the reference voltages, but the tracking error signal is no greater than in the discussed track digressions (see FIG. 3a and FIG. 3b). A person skilled within the art would not find any disclosure in Takasago et al., as illustrated in FIG. 3a and FIG. 3b to select a predetermined threshold for the tracking signal that is a fraction of the a maximum value, wherein the maximum value corresponds to the maximum lateral deviation with respect to the center of the track. There is no teaching within Takasago et al. for the tracking error signal value to have a maximum value that occurs at a point of the maximum lateral deviation from the center of the track. Takasago et al. teach that the error tracking signal swings from positive to negative during off track conditions. There is not even a mention of using a fractional portion of the reference voltages, or that the reference voltages are a fractional portion of a predetermined threshold as asserted by the Examiner. Accordingly, this rejection of Claims 3 and 15 is respectfully traversed.

The Advisory Action affirms the rejection of Claims 4, 16-19, 21, and 22 under the provisions of 35 U.S.C. §103(a) as being unpatentable over Takasago et al. applied to claims 2, 14 and 15 above.

Regarding Claims 18 and 21, the Examiner states that Takasago et al. disclose at column 5, lines 49 - 51 a tracking signal having a nominal value of zero, and that the tracking signal has a maximum value. The Examiner also asserts that a preselected fraction of the maximum value is chosen as the predetermined signal threshold; which as previously discussed is an unfounded assertion. As discussed above, there is no teaching within Takasago et al. for the tracking error signal value to have a maximum value that occurs at a point of maximum lateral deviation from the center of the track. Takasago et al. teach that the error tracking signal swings from positive to negative during off track conditions. The Applicant, respectfully, requests that the Examiner indicate where within Takasago et al. there is any disclosure or suggestion that V_{REF} is a fraction portion of anything.

The Examiner admits that Takasago et al. is silent regarding the predetermined threshold being either 0.5 or 2/3 of the maximum value corresponding to the maximum lateral deviation. The Examiner further states that Takasago et al. show an unspecified maximum value and an unspecified fraction of the maximum value in Fig. 3a. The Applicant respectfully disagrees. Takasago et al. show V_{REF} and that the signal can exceed V_{REF} . There is no disclosure or suggestion within Takasago et al. that V_{REF} , as taught therein, is a fractional portion

of any value.

The rejection has failed to show the recitation for the predetermined threshold being either 0.5 or 2/3 of the maximum value corresponding to the maximum lateral deviation is used for a particular purpose, or solves a stated problem. Initially, the Applicant, respectfully, points out that the Examiner has not provided any authority that allows for this line of reasoning to be used within an obviousness rejection. Moreover, the Applicant points out that there is a clear purpose and advantage to the stated limitations in that the present invention is rating the track.

The Applicant draws the Examiner's attention to page 10, lines 4-8 of the specification of the present invention wherein the tracking error of 0.5 of the maximum value is disclosed as the preferred error tracking parameter to if the track is defective. Accordingly, there is a stated purpose to the tracking error of 0.5 of the maximum value as recited by rejected Claim 18 contrary to the assertions of the Examiner. The limitations of the claims must each be given consideration. The Examiner may not simply brush aside specific limitations by reading the same reference voltages of Takasago et al. on the predetermined threshold and the specifically different recitations of the preselected fractions that are used to determine that predetermined threshold. The Applicant, respectfully, submits that the reason that Takasago et al. do not disclose, or suggest using fractions of the reference voltages is that Takasago et al. has no such stated purpose for rating the track for defects..

The specification of the present invention at page 12, lines 14-22 wherein the value of 2/3 is discussed as preventing accidental writes to the adjacent track. Accordingly, there is a stated purpose to 2/3 fractional amount recited by rejected Claim 21 contrary to the assertions of the Examiner. The Applicant points out that of the cited reference, Takasago et al. has no such stated purpose. The Applicant, respectfully, submits that the reason that Takasago et al. do not disclose, or suggest using fractions of the reference voltages is that Takasago et al. has no such stated purpose for preventing accidental writes to the adjacent track..

Regarding Claims 4, 16, 19 and 22, the rejection admits that Takasago et al. do not disclose the predetermined time periods recited by the rejected claims in a range between 50 μ s and 75 μ s. Furthermore, regarding claims in 19 and 22, the Examiner states that Takasago et al. do not disclose that the recited period of time is approximately 60 μ s. The Applicant, respectfully, points out that the rejection does not contend that Takasago et al. suggest

implementing any of the foregoing time periods. The Examiner's position is that it would have been obvious for a person of ordinary skill in the art because the Applicant has not disclosed any advantage to these time periods. Initially, the Applicant objects to the line of reasoning used in this rejection because the Examiner has not provided any authority that such a line of reasoning is valid for making a rejection based on obviousness. Moreover, the advantages are clearly stated in the specification. The advantage of recited period of time is approximately 60 μ s is given by the specification of the present invention at page 12, lines 14-22 wherein the value of 60 μ s is discussed as preventing accidental writes to the adjacent track. The range between 50 μ s and 75 μ s is used as a range around the preferred value of 60 μ s as an acceptable range. The Applicant's position is that the rejection employs improper hindsight in this obviousness analysis. In order to determine obviousness there must be some suggestion or motivation within the prior art to make the modification. The rejection provides no such suggestion of motivation within the cited prior art referenced to make the modification made in the Final Office Action. The Examiner has also not advanced any authority to support the assertion made in the Final Office Action that the foregoing rationale is a proper rationale for determining obviousness.

The MPEP at §2143 states that to "establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." The Applicant respectfully points out that the rejection does not satisfy any of the three foregoing criteria and, therefore, has not made a *prima and facie* case of obviousness. Moreover, the motivation to make the modification suggested by the Examiner must be found within the prior art reference, and the Examiner has in fact stated that is not found within Takasago et al. The Applicant, respectfully, asserts out that a person skilled in the art would not be motivated by the teaching of Takasago et al. to make the modification suggested by the Final Office Action. Takasago et al. pertains to identifying digressions within the tracking signal and correcting tracking errors.

Takasago et al. does not pertain to identifying defective areas on a disk. For the foregoing reasons, this rejection is respectfully traversed.

Claim 17 is rejected under the provisions of 35 U.S.C. §103(a) as being unpatentable over Takasago et al. The Applicant, respectfully, submits that the arguments presented within the Final Office Action that Claim 17 substantially corresponds to other claims, such as Claim 13, is incorrect. There are numerous elements within Claims 14, 15, 16 and 17 that are not found within Claim 13. The Applicant responds to this rejection by pointing out that Takasago et al. do not disclose or suggest performing the actions recited in Claims 13-17. Takasago et al. do not disclose the predetermined time periods recited by the rejected claims in a range between 50 μ s and 75 μ s. Takasago et al. do not disclose or suggest a recording device having thresholds that are a preselected fraction of the signal level representative of the maximum deviation of from the center of the track. Takasago et al. do not disclose or suggest a recording device that discontinues recording if the tracking signal exceeds a threshold for a predetermined period of time. Accordingly, this rejection is respectfully, traversed.

Claims 5 and 6 are rejected under the provisions of 35 U.S.C. §103(a) as being unpatentable over Takasago et al. in view of Tsuchiya et al. (JP 01253638 A). The rejection admits that Takasago et al. do not disclose the steps of a) examining the integrity of predetermined test tracks of the record carrier, b) examining the integrity of tracks adjacent the relevant test track each time that upon the examination of the test track it appears to be defective, in order to determine this way the number of tracks affected by the same spot defect, c) entering the relevant tracks in a defect list each time that the number thus determined in step (b) is greater than a predetermined threshold value, and d) storing the defect list into a memory. The Examiner's position is that Tsuchiya et al. teach the foregoing recited elements. The Applicant respectfully disagrees. Tsuchiya et al. teach a reference value WC that is set to have the magnitude of defect smaller than a normal checking reference. The defects are detected using a regenerated signal RF, the tracking error signal TE and a focused error signal FE within a single track. Tsuchiya et al. teach recording each defect that exceeds the reference value WC within a memory and then reads the contents of the memory, which includes each individual defect. The Applicant, respectfully, asserts that there is no disclosure or suggestion within Tsuchiya et al. for c) entering the relevant tracks to any defect list each time that the number thus determined in step (b) is greater than a predetermined threshold value. Tsuchiya et al. teach recording of each

individual defect within a track. There is no suggestion or disclosure within Tsuchiya et al. for providing a threshold value to determine the number of tracks that are affected by the same spot defect and only recording those defects that are at least as large as the threshold. Accordingly, this rejection is respectfully, traversed.

Claim 6 defines subject matter for a predetermined number of tracks being skipped between successive test tracks. There is no disclosure or suggestion within Tsuchiya et al. for skipping a predetermined number of tracks between successive test tracks. Accordingly, this rejection is respectfully, traversed.

Claims 7, 8 and 20 are rejected under the provisions of 35 U.S.C. §103(a) as being unpatentable over the combination of Takasago et al. with Tsuchiya et al. and further in view of U.S. Patent No. 4,821,521 issued to Hosoya (hereinafter referred to as Hosoya).

Takasago et al. and Tsuchiya et al. alone or in combination do not provide any disclosure or suggestion for a threshold value to determine the number of tracks that are affected by the same spot defect and only recording those defects that are at least as large as the threshold. The addition of Hosoya to the combination of Takasago et al. and Tsuchiya et al. does nothing to correct this error. Hosoya at column 6, lines 22-25 discloses storing defective sector information in the optical disk. The cited references, alone or in combination, do not disclose or suggest creating a defect list that includes tracts affected by the same spot defect wherein the number of tracts is greater than a predetermined threshold. Accordingly this rejection is, respectfully, traversed.

Claim 8 is rejected under the provisions of 35 U.S.C. §103(a) as being unpatentable over the combination of Takasago et al. with Tsuchiya et al. and further in view of Hosoya. The combination of Takasago et al. with Tsuchiya et al. teaches recording each individual defect within a track. There is no suggestion or disclosure within Tsuchiya et al. for providing a threshold value to determine the number of tracks that are affected by the same spot defect in only recording those defects that are at least as large as the threshold. The addition of Hosoya to the combination of Takasago et al. and Tsuchiya et al. does nothing to towards providing a threshold value to determine the number of tracks that are affected by the same spot defect in only recording those defects that are at least as large as the threshold. Hosoya, at column 2, lines 64-68 and FIG. 7, teaches referring to defective sector information in the optical disk. The cited references do not disclose or suggest the creating a defect list that includes tracts

affected by the same spot defect wherein the number of tracts is greater than a predetermined threshold. Accordingly this rejection is, respectfully, traversed.

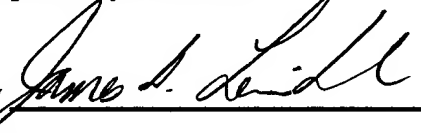
Claim 20 is rejected under the provisions of 35 U.S.C. §103(a) as being unpatentable over Takasago in view of Tsuchiya et al. The Applicant, respectfully points out that there is no suggestion or disclosure within Tsuchiya et al for providing a threshold value to determine the number of tracks that are affected by the same spot defect and only recording those defects that are at least as large as the threshold. Claim 20 depends from Claim 5 and is believed to be allowable on that basis.

The foregoing amendment adds new Claim 23 that defines subject matter for examining a record carrier for the presence of a defect. Claim 23 defines subject matter that is of similar scope to the claims previously discussed and is therefore believed to be allowable for the aforesaid reasons. Specifically, Claim 23 defines subject matter for monitoring a track and generating a tracking signal that is rated for the presence of spot defects that is not disclosed or suggested by the cited references. Claim 23 further defines subject matter for entering a track that is determined to be defective into list and creating a suspect area list for opposite sides of the track if the track it appears to be defective which also is not disclosed or suggested by the cited references.

Applicant is not aware of any additional patents, publications, or other information not previously submitted to the Patent and Trademark Office which would be required under 37 C.F.R. 1.99.

In view of the foregoing amendment and remarks, the Applicant believes that the present application is in condition for allowance, with such allowance being, respectfully, requested.

Respectfully submitted,

By 

James D. Leimbach
Patent Attorney, Reg. No. 34,374

**Please address all correspondence
for this case to:**

Michael E. Belk
Senior Intellectual Property Counsel
Philips Intellectual Property & Standards
Philips Electronics N.A. Corp.
P.O. Box 3001
Briarcliff Manor, NY 10510-8001 USA
914-333-9643

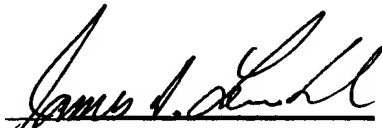
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Person Signing: James D. Leimbach